

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/002708

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 G10D 7/04**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC7 G10D 7/04, 7/02, 7/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Korean Patents and applications for inventions since 1975

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and application for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 10-2002-0046262 A (LEE, HO JOON) 20 June 2002 See the whole document.	1 - 4
X	JP 03-073991 A (TASHIMA KATSUYUKI) 25 July 1991 See the whole document	1 - 4
X	JP 13-272973 A (HIRAMOTO TAKAO) 5 October 2001 See the whole document	1 - 4

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	
"A"	document defining the general state of the art which is not considered to be of particular relevance
"E"	earlier application or patent but published on or after the international filing date
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O"	document referring to an oral disclosure, use, exhibition or other means
"P"	document published prior to the international filing date but later than the priority date claimed
"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&"	document member of the same patent family

Date of the actual completion of the international search  24 FEBRUARY 2005 (24.02.2005)	Date of mailing of the international search report  <b>25 FEBRUARY 2005 (25.02.2005)</b>
Name and mailing address of the ISA/KR   Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer  PARK, HYUN SOO Telephone No. 82-42-481-8114